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Progress in the implementation of the programme of action for the sustainable development of small island developing States

Report of the Secretary-General

Addendum

Land resources in small island developing States*

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* The present report has been prepared by the Food and Agriculture Organization of the United Nations in accordance with arrangements agreed to by the Inter-Agency Committee on Sustainable Development; it is the result of consultation and information exchange between United Nations agencies, interested government agencies and a range of other institutions and individuals.

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I. Land resources issues

1. Human settlements, agriculture, commerce, industry and tourism development have historically been the major competing uses for limited land resources in many small island developing States. As human needs and population grow, the pressure on land and other natural resources continue to increase. The most significant issues for land and related resources identified for the South Pacific are outlined in box 1.

2. Many factors and causal relationships influence the management of land resources. Increased demand for monetary income has led to greater production of cash crops for export and to inappropriate tourism development. For agriculture, this has meant increased areas under cultivation and more mechanized production systems. Land pressures in some small island developing States have been further worsened by the intensification of animal production, particularly high-input production chains that are dependent on concentrate feed. Unsustainable agricultural practices have contributed to deforestation; changes in cropping pattern, with consequent losses of biodiversity across the landscape; loss of soil fertility; and agrochemical pollution of soils, freshwater and coastal resources downstream. Furthermore, land tenure and other policy issues critically affect land management, as do a multiplicity of socio-economic factors, such as trade and the influence of outside markets, traditional and cultural practices, and demographics. Small island developing States rarely have an extensive and stable cadre of professional expertise. For this reason, there is a lack of information on land resources and appropriate tools, best practices and technologies for implementing sustainable land-use options and making informed policy decisions.

3. National decisions and the capacity to manage land resources sustainably can also be constrained by other factors, including a lack of institutional capacity to properly negotiate rights to exploit natural resources by foreign companies. Poorly designed projects financed by donors have sometimes been based on purely economic considerations, without taking due account of local environmental conditions and national priorities, as a result of inappropriate forestry and tourism policies. The substantial degradation and depletion that has occurred has begun to focus the attention of communities to implement sustainable management of the remaining resources.

II. Actions taken to address the issues

4. Efforts have been undertaken to address the key issues identified in the Programme of Action for the Sustainable Development of Small Island Developing States by multiple stakeholders, including international agencies, national Governments; international, national and local non-governmental organizations; and small island developing States communities. Regional efforts supported by these different stakeholders have been successful in coordinating collective needs, strategies and information flow. Some examples of efforts at addressing key issues are outlined below.

A. Information systems, integrated land planning and management

5. The World Bank, the Inter-American Development Bank, the Caribbean Development Bank, the United States Agency for International Development (USAID) and the Food and Agriculture Organization of the United Nations (FAO) have funded projects in several small island developing States for the following purposes: the design of policy instruments; environmental impact assessments; the preparation of guidelines and draft legislation for several aspects of land use planning and management; institutional strengthening; surveys and resource assessments; and watershed and protected areas management.

6. The United Nations Development Programme (UNDP) and the United Nations Centre for Human Settlements (Habitat) have been assisting small island developing States in the Caribbean with the development and expansion of computer-based geographical information systems (GIS). Regional training needs have been assessed and a programme of assistance formulated. One outcome of a ministerial meeting in Barbados in 1995 was the establishment of a task force comprising Barbados, Jamaica, Saint Vincent and the Grenadines, the Organization of the Eastern Caribbean States/Natural Resources Management Unit (OECS/NRMU) and Habitat to initiate work on a harmonized regional database. In addition, institutional strengthening and capacity-building measures have been undertaken at the national level in many countries, with the support and assistance of Habitat and UNDP. These include technical cooperation programme initiatives, fellowships, and in-service training.

Box 1. Land resources issues specific to South Pacific small island developing States (FAO/SPREP, 1996)

Land. High population growth rates (as high as 4.2 per cent in the Marshall Islands) has increased the pressure on land and has led to an intensification of land use. The availability of agricultural land in hectares (ha) per head of population has been on the decline in most small island developing States. The ratio of agricultural land to agricultural population has varied widely, from 7.63 ha in Samoa to only 0.36 ha in the Solomon Islands in 1994. Customary land tenure disputes and difficulties hamper access (non-availability, no titles, no security) to land for better management. Islands with sloping land areas have little access to appropriate technologies to extend land use, for example, for sustainable farming on steep slopes. Stakeholders are in conflict over farming, infrastructure (in particular road-building) and residential uses, especially in coastal areas.

Forest resources. The rate of logging or loss of tree cover is relatively high. The current use of logging practices is often unsound and unnecessarily destructive. Forest areas are cleared for farming. Consequently, there is increasing soil erosion. In countries where the forest resources are already fragile, the destruction of forests by cyclones is serious. There is little sound forest development or reforestation.

Water resources. The availability of water resources is directly linked to the land-use patterns and utilization of land resources. Insufficient watershed management and logging of forests has led to uncontrolled water flow, and thus to the destruction of land areas through more frequent floods and droughts during wet and dry seasons, respectively. The availability of water resources is in sharp contrast with the constantly increasing water demand from rapid urbanization, new industries, changing lifestyles and more extensive reticulation. In the atoll countries, the balance of supply and demand is critical. Freshwater stocks are subject to contamination from industrial and agricultural wastes, chemicals and rising sea levels. In addition, population pressure, expanding tourism and reduced precipitation in recent decades have resulted in the overexploitation of groundwater and seawater intrusion, with consequent further deterioration of water quality and quantity.

Soil/sand and gravel. Inland soils suffer from an increasing depletion of nutrients and other forms of degradation due to overuse of available land and insufficient land conservation and management practices. The cropping systems are not adapted to the new conditions. In all small island developing States, the most important minerals currently being mined are sand and aggregated materials, for use in construction and landfill. Demand is outstripping traditional supplies in places and causing environmental damage.

7. OECS/NRMU has been sensitizing national Governments in the Eastern Caribbean on the concept of island systems management (ISM). This approach recognizes the need for a holistic approach to the use of island resources. The ISM approach seeks to eliminate sectoral boundaries through the establishment of a multisectoral multidisciplinary mechanism which links a partnership arrangement of public and private sectors, non-governmental organizations and community-based organizations in the decision-making process.

8. FAO is promoting an improved approach to land resources management based upon successful experiences as well as existing approaches developed by other institutions. The approach emphasizes the integration of physical, socio-economic and institutional aspects of land use, and stresses the need for the active participation of all stakeholders in decision-making. Although not specifically developed for small island developing States, this approach is highly appropriate for them. Guidelines and frameworks have been developed, including structural and institutional guidelines on natural resource management in the twenty-first century, and a forthcoming implementation manual for natural resources management (see box 2).

9. A specific project has been completed in Grenada to assist decision makers and land users in sustainable land resources planning and management at the national and parish levels. A critical component of the project is the development of a national computerized land information system to increase the effectiveness of planning and implementation of development activities as well as to address the needs of multiple agencies. This is done through the establishment of GIS and a comprehensive and quality database (see box 3). Land use planning, management and information systems workshops for Caribbean countries have been held in Grenada, resulting in the development of agro-ecological zoning and land use planning guidelines. Similar efforts have been made in Trinidad and Tobago, Saint Lucia and Belize. Information and corporate software (FAO/Soil Profile Database, Ecocrop-1) have been distributed to institutions working on land use characterizations and classification in Fiji, Tonga and Vanuatu.

10. The International Institute for Environment and Development has documented a strategic approach to island development, drawing on its own experience and the experiences of the World Bank and the World Conservation Union.

B. Farming systems and soil management

11. The farming systems approach to development (FSD) is considered to be potentially useful for improving planning and analytical capacity in identifying, developing and implementing ways to improve the productivity and therefore welfare of those involved in agriculture in a manner that is equitable and sustainable. FAO is currently working with the Institute of Research and Extension Training in Agriculture, of the University of the South Pacific in Samoa to implement FSD training sessions and to produce regionally specific training and extension materials. Seven countries in the South Pacific are associated with the project – the Cook Islands, Fiji, Papua New Guinea, Tonga, Solomon Islands, Vanuatu and Samoa. Envisaged outputs include an introduction to the farming systems development for the South Pacific and a study on the farming systems approach to sustainable agriculture development in the South Pacific. Recommendations to institutionalize FSD into national programmes, build further awareness of this approach and train extensionists in the methodology are integral components of the project.

12. Sustainable land stabilization and soil conservation programmes have been undertaken within the broader framework of the protection and enhancement of the fragile island environment in selected small island developing States. A soil erosion control programme was formulated in Jamaica. In Samoa, the preparation of an initiative entitled "World overview of conservation technologies" has been completed. In Barbados, a development programme has been formulated for the stabilization and conservation of the scarce and highly erosion-prone arable lands in the Scotland District and general rehabilitation of agriculture in the area. Training efforts and the strengthening of human resource capacity within the local soil conservation unit have been made. The work resulted in a project entitled "A new framework for conservation-effective land management and desertification control in Latin America and the Caribbean". Sponsored by the Fertilizer Advisory Development Information Network for Asia and Pacific, a subregional workshop on environmentally sound fertilization in the Pacific islands has been held in Samoa.

13. Many Pacific island countries have embraced a project entitled "Framework for action on the conservation of lands in Asia and the Pacific". Among the collaborators are the

Box 2. Integrated land use planning and management: a pragmatic programme for land management and land use planning (FAO/UNEP, 1996)

- Installation of a national task force, comprising technical expertise to deal with the various problems and with the power to take decisions and legal actions. Experience has shown that it is difficult to create such a group. In practice, the task force should be composed of high-level decision makers, who generally do not have the necessary technical expertise, assisted by ad hoc technical groups for specific issues.

- Awareness creation at all levels of the society about the need to increase production while conserving natural resources. The major goal should be to generate debate on these issues, to receive feedback from experience at the grass-roots level and to convey the message that Governments cannot be expected to resolve every local conflict.

- Creation of a national resource database, containing information on physical, economic and legal dimensions of land use planning and management.

- Identification of the natural resource potential and its particular constraints for a range of possible agricultural and non-agricultural land use scenarios.

- Provision of information to land users (top-down) and solicitation of feedback on their objectives, aspirations and priorities (bottom-up). As it is often difficult to hold discussions with all individual stakeholders, this exchange of ideas can be organized through the creation of platforms for negotiation and discussion. This requires the involvement of identified local resource management groups, local chiefs, non-governmental organizations working at the village level and planners.

- Identification of the needs for production and conservation of local communities, and constraints faced by them. Local communities usually have already interesting solutions in hand but lack means and technical support to implement them.

- Development of land management plans based on long-term objectives of both government agencies and stakeholders. Action should be decided through negotiation. The plan should outline needed actions, define the responsibilities and the involvement of the different parties, and lay down ground rules. Follow-up actions should monitor the application of the plan so as to ensure that rules are followed and assess the need for modification of the plan.

- Provision of personnel and means to implement the plans, and enactment of enabling legislation. Enforcement of management plans or rules may be achieved through social sanctions.

Box 3. Grenada: Land Resources Information System (FAO, 1994)

Grenada is highly dependent on agriculture, deriving 90 per cent of its export earnings from this source. The agricultural development strategy of the Government is to improve the productivity of traditional export crops while diversifying into non-traditional crops for export and for agro-industrial integration into the expanding tourist sector. On the island of Grenada, 77 per cent of the land area has slopes exceeding 20 degrees. Only 33 per cent of the soils are deep, well drained and free of cultivation constraints. The rest are rocky or have seasonal drainage problems. The main objectives of the project were to create the technical basis to support rational development and conservation of the country's natural resources information systems.

The Grenada Land Resources Information System (GLRIS) is a computer-based system intended to assist decision makers and land users in land resources planning and management at the national and parish levels. The system, established by the Land Use Division of the Ministry of Agriculture, Lands, and Surveys, in conjunction with FAO, provides a service to a wide range of users, including planners, researchers, natural resource and agricultural managers. GLRIS comprises four components which interact closely to generate needed outputs: (a) a geographically referenced database containing data elements for land resources analysis; (b) models to analyse the data in the database; (c) hardware and software to process models and data; (d) trained staff to operate the system.

The GLRIS database contains information on agro-climate, soils/terrain, hydrology, land use and vegetation, protected areas, topography, plant environmental requirements, crop production systems and forestry production systems. The result is a user friendly and easily updated system which can be used to rapidly provide land suitability assessments, environmental impact assessments, land degradation assessments, land use optimization, planning and natural resource management.

International Board on Soil Resources and Management (IBSRAM) Pacificland Network and the European Union funded Pacific Regional Agriculture Programme. Through the Pacificland Network, the issues related to steep lands and land intensification are being addressed in Fiji, Papua New Guinea, Vanuatu and Samoa. The work is seeking to assess the extent of the problems of land degradation and to develop acceptable technologies for sustainable agriculture based on existing systems and local technical knowledge.

C. Forestry

14. A number of initiatives have been undertaken at the national and regional levels, with the support and involvement of the donor community, including agencies, funds and programmes of the United Nations system in the area of sustainable forestry. In collaboration with UNDP, FAO convened a regional meeting in Barbados in September 1997 to discuss a strategy for supporting the establishment of national forestry policies in Caribbean small island developing States. As a result of the meeting, work has been initiated for elaborating such policies in a number of Caribbean small island developing States, with technical support from FAO. In addition, the UNDP forest capacity-building programme is currently supporting initiatives for the development of national forestry action plans. A project for Jamaica has been recently approved by UNDP's Capacity 21 Management Committee. Watershed management and conservation education projects (see box 4), integrate conservation farming systems and agroforestry practices in addressing the interrelationship of upstream-downstream aspects.

15. Financial assistance and advisory technical services have been provided to support a working group on agroforestry for the Pacific to document the wealth of indigenous and technical knowledge and experience associated with such systems. The agroforestry information toolkit, prepared at a regional participatory workshop in Fiji

Box 4. Watershed management and conservation education in Samoa (FAO, 1994)

This UNDP/FAO project (1992-1995) looked at the interrelationship between the management of upstream and downstream areas within a given watershed. This relationship has been demonstrated through the implementation of soil conservation and watershed management measures, such as conservation plantation, agroforestry practices, plantation of forest and fruit trees by farmers, conservation farming systems, and extension and education programmes for different target groups. A monitoring system has also been developed to increase understanding of the impact of upstream management on water quantity and quality and other downstream resources. The destruction of vegetative cover by frequent tropical cyclones has led to accelerated soil erosion and landslides, with a direct impact on the watershed, agricultural production, water supplies, hydropower generation, lagoons and reefs. The rehabilitation of upstream areas and the participation of local population in conservation of downstream areas are integral parts of the project. The objective is to facilitate the conservation of flora and fauna and improve the socio-economic condition of watershed dwellers.

in 1997, targets extension-level personnel, and will be published as a joint effort of, *inter alia*, FAO, IBSRAM, UNICEF, and 60 national resource persons.

D. Water resources

16. FAO activities in Fiji have addressed sedimentation control and flood mitigation, as well as watershed management and river improvement. Dredging activities in the main rivers in Fiji have resulted in an improvement of poorly drained and underutilized land and led to an agricultural development programme for an area of 6,300 ha in the Central Division. A subsequent project identified the major causes for erosion and the high sedimentation of the Rewa River, and elaborated a detailed programme combining legal aspects, flood control, river regulation and appropriate land management practices for sustainable development of agricultural lands. FAO also put in place a project to increase food production through the expansion of arable land by reducing flood risks and improving the drainage capacity of the major rivers. A water resources assessment was commissioned in February 1997 to provide technical options for introducing small-scale low-cost supplementary irrigation and water control schemes into rainfed cropping sites of a special programme for food security in Papua New Guinea. This is a multidisciplinary project, which is also doing an analysis of socio-economic constraints.

E. Natural areas protection and coastal area management

17. A number of small island developing States are beginning to develop innovative programmes to save their forests and coral reefs. Through these programmes, island peoples can still use their forests and reefs as a traditional source for food, fish, renewable wood products and the sustainable harvesting of the vast majority of species of plants in the forests that are not trees. Small island developing States like Saint Kitts and Nevis and Aruba have planned for the expansion of protected areas.

18. In 1997, FAO completed a draft document that is planned for publication in 1998, entitled "Agriculture, forestry and fisheries and integrated coastal area management", which is applicable in large measure to small island developing States. It covers the issues, perspectives, policy and planning process for integrated coastal area management (ICAM), as well as more specific advisory documents on integrating agriculture, forestry and fisheries in coastal area management and conflict resolution in ICAM.

F. Participatory research and development

19. A USAID-funded programme brought universities, national programmes, non-governmental organizations and farmers together in Cape Verde. The programme resulted in changes in the national agricultural research system of Cape Verde, the establishment of an institutional framework for

long-term research planning; the establishment of a participatory monitoring and evaluation programme; the establishment of inter-institutional collaboration and implementation of interdisciplinary research; the establishment of linkages with farmers and the extension service; and conduct of on-farm research.

G. Natural disasters

20. An important consideration in the use of land resources is to identify the susceptibility of specific land areas to the impact of natural disasters. During the period under review, USAID and the Office of Disaster Preparedness in Jamaica undertook one of the first efforts at natural hazard mapping in the Caribbean. The Organization of American States, with financial support from USAID, carried out landslide hazard assessment in the OECS countries, and is continuing with coastal storm surge hazard assessment, in conjunction with the Caribbean Meterological Institute. The Government of Jamaica has recently adopted new guidelines for land use planning, which calls for special zoning regulations.

21. The Caribbean Disaster Emergency Response Agency, in conjunction with FAO, is working with Eastern Caribbean States in developing the details of national and regional hurricane disaster preparedness and impact mitigation strategies related to agriculture, forestry and fisheries. Components include a review of information management in the sector, sector hurricane preparedness and mitigation action plans, and public education and awareness.

H. Physical planning and development

22. A number of initiatives have been pursued at the national and regional levels with the support of agencies, including Habitat/UNDP and the Organization of American States. Technical assistance to physical planning units has been supplied for the preparation of physical development plans, and for institutional strengthening through training of personnel and provision of GIS equipment. Initiatives include the preparation of building codes and guidelines, planning and infrastructure standards, physical planning legislation, national physical development plans and housing and land management policies.

III. Conclusions and recommendations for future action

A. National level

23. Critical efforts to better address land resources include the need to better understand land use objectives, land use options and trade-offs between uses; the need for institutional collaboration and coordination of ministries; the need to implement land dispute resolution systems; and the need to use technologies as a basis for land use decision-making.

24. Institutionally, there is a need to take an intersectoral approach to addressing the complex issues of land resources, wherever this is not already being done. This will entail the adoption of an integrated planning process, with an enhanced collaboration on the part of the government and all relevant non-governmental stakeholders to make the best use of the comparative advantage of each.

25. Numerous tools, approaches, techniques and guidelines have been developed by relevant United Nations and non-United Nations organizations, which small island developing States can take advantage of to address issues of land resources. A number of these modalities are currently being utilized or tried in individual small island developing States. There is a need, however, for training in the use and institutionalization of these tools, approaches and guidelines in all small island developing States.

26. Natural resource conservation should be strongly promoted by rehabilitating traditional attitudes and value systems, and by making people aware of the finite and fragile nature of those resources in today's conditions, particularly in small island developing States.

B. Regional level

27. Mechanisms must be put in place to enhance the communication networks that have been developed, as well as to develop those which are still needed. In view of the complexity and diversity of the natural resource management task and the difficulty and financial burden associated with the provision of the required multidisciplinary teams of

Box 5. The way forward: outcome of a Caribbean ministerial meeting on the Programme of Action for th Sustainable Development of Caribbean Small Island States, Barbados, 10-14 November 1997

In the chapter of its report on land resources, the meeting recommended:

(a) To encourage the United Nations Centre for Human Settlements (Habitat) to continue and expand assistance to the Caribbean Human Settlements Programme Office, in collaboration with other partners. This office will support elements of the Programme of Action and establish cooperative linkages with the implementation of the Caribbean Human Settlements Plan of Action. The Plan of Action has already been considered by the ministers responsible for housing and human settlements. Within this framework, Habitat should provide additional support for the improved availability, affordability and environmental quality of shelter in human settlements, in accordance with chapter 7 of Agenda 21;

(b) To support efforts by Caribbean small island developing States to further develop human settlements and environmental information/databases, which would also enhance the introduction or expansion of computer-based geographical information systems to inform policy decisions for sustainable development;

(c) The need for comprehensive land use plans recognizing the philosophy of island systems management, paying special attention to anthropogenic activities, particularly farming, settlements and industry, and their impacts on coastal and marine resources and biodiversity conservation needs;

(d) To support the systematic assessment and mapping of hazardous areas, and to incorporate this information in the formulation of land use regulations and building standards for the purpose of ensuring the safety of the population, reliability of infrastructure and sustainability of land use;

(e) To examine the integration of national forestry policies into larger frameworks for natural resources management at the national level;

(f) To explore the promotion of the Iwokrama rainforest programme (Guyana) as a model for appropriate land use and natural resource management policies at the national, regional and international levels;

(g) To pursue at the national and regional levels an approach for integrating human settlements, land use, disaster mitigation and other related programmes, projects and policies, as appropriate;

(h) To support the development of a land registration and titling system throughout the region, and consider the use of land dispute resolution systems in addition to the courts, improve training for lawyers, especially legal draughtsmen, on land titling and related issues, establish electronic registers for legal documents (as opposed to paper registers), and develop legislative and regulatory frameworks for information technology policy, administrative dispute resolution, and land tenure and distribution at the national level;

(i) To invite support for related integrated information initiatives by the UNEP Global Resource Information Database and the United Nations Centre for Regional Development at the international level; and the University of the West Indies, the Trinidad and Tobago GIS Association, and OECS/NRMU at the regional level.

professionals in each country, the establishment of an appropriate regional mechanism within one of the existing regional organizations might be considered. Such a mechanism would provide resource management services to small island Governments, make available skills and experience that would be much more difficult to build at the national level, and facilitate the transfer and sharing of technical information and research results.

28. Effective coordination of measures designed to take an integrated approach to the planning and management of land resources between regional institutions, including universities and relevant international programmes or initiatives, should be encouraged in all small island developing States regions where such measures have not yet been taken.

29. At a recent Caribbean ministerial meeting on the Programme of Action for the Sustainable Development of Caribbean Small Island States (Barbados, 1997), specific recommendations were made regarding land resources (see box 5). Similar recommendations pertinent to each region would be helpful in other regions.

C. International level

30. International agencies and organizations must better coordinate their efforts in assistance to small island developing States; assist in the strengthening and support of regional networks; facilitate the adoption and implementation of appropriate integrated planning processes for natural resources as a means of ensuring their sustainable use; provide technical assistance in support of information systems for effective decision-making regarding land resources, as well as to assess and revise national legislation, if needed; implement appropriate training programmes; and facilitate the application of databases in integrated land use planning and management.

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Report of the Secretary-General

Addendum

Biodiversity resources in small island developing States*

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I. Introduction

1. The biological diversity and the high degree of endemism of many species on small island developing States is well known. Over 4,00 species of plants and animals are endemic to small island developing States (see table). Because of their small size and the endemic nature of many species, the biological diversity of small island developing States is extremely fragile. One consequence of the relative isolation of small island developing States is the large incidence of unique biological adaptations – flightlessness in birds, gigantism and dwarfism in other groups, and many modifications of form, diet and behaviour. Restrictive habitats and small populations often generate unique features and adaptations to prevailing environmental and climatic conditions, but under such circumstances species often lack the ability to adapt to rapid changes (see table). Small island developing States are not a homogeneous group, although many of them face similar problems with respect to the conservation and management of their natural resources.

II. Current situation

2. The current situation on aspects of biodiversity in small island developing States is described below. The focus is on (a) deforestation and forest degradation, (b) traditional subsistence farming systems, (c) *in situ* and *ex situ* conservation facilities, (d) coastal and marine biodiversity, (e) freshwater biodiversity, and (f) aquaculture.

Deforestation and forest degradation

3. Deforestation and forest degradation in small island developing States have led to extinction of many animal and plants species, resulting in irreversible losses of genetic resources and ecosystems. Considering their limited land area and their relative fragility, strong winds (e.g., hurricanes, cyclones, typhoons) can cause serious and frequently recurring damage to natural and planted forests. The impacts of human activities are usually even more severe. Deforestation and forest degradation have affected the dynamic interactions of ocean, coral reefs, land formations and vegetation.

Traditional subsistence agriculture

4. This practice, using family labour and a few purchased inputs, remains predominant in over half of all small farms in small island developing States. It has the advantage of being generally environmentally friendly but has the disadvantage of low productivity. Growing population and economic pressures are disrupting ecologically sound farming practices, such as fallow rotation systems. Thus, moderate input systems are becoming more common in small island developing States. Because of inadequate farm and production management, these inputs are often not used effectively, leading to economic losses and environmental damage, including loss of biodiversity. With the encroachment of agriculture on natural or quasi-natural ecosystems, plant and animal genetic resources are being lost, modern cultivars are replacing local ones and intensive livestock production systems are developing. As a consequence, diseases and pests are increasing in small island developing States, particularly crop pests that are resistant to common pesticides.

Plant and animal genetic resources

5. These resources are the basis for sustainable agricultural production. It is particularly important for small island developing States to have access to plant genetic resources from countries in the same agro-chemical zone for the diversification of their main crops. The establishment of protected areas – forest reserves, national parks and wildlife sanctuaries, supported by botanical gardens, herbaria etc. – is essential for conserving small island developing States' biological diversity. Such areas also have the potential to become the basis for ecotourism. However, establishment of *in situ* and *ex situ* conservation systems require both financial and human resources, often not adequately available in small island developing States. Therefore, cooperation among small island developing States is proving desirable as a means of evaluating and conserving small island developing States' genetic resources and safeguarding them for future use. Fortunately, there appears to be a growing recognition of the dangers posed by the introduction of exotic genetic resources and the need for environmental impact assessments before such introductions take place. Practitioners of sustainable food production need access to reservoirs of crop cultivars, livestock breeds and aquaculture seeds with high productivity potential, good resistance and quality characteristics, and adaptability to local environments.

Marine ecosystems

6. Small island developing States' marine ecosystems and biodiversity are especially susceptible to damage, including destruction of coral reefs by fishermen or tourists; pollution, sedimentation and land reclamation; natural disasters; conversion of mangroves and wetlands that result in loss of important nursery areas; use of large-scale pelagic

Summary of the status of animal and plant species (threatened, extinct and endemic) in small island developing States and territories, and their conservation status, as measured by the number and size of legally protected areas

	Animals			*Plants*			*Protected areas*	
Country or area	*Threat*	*Extinct*	*Endemic*	*Threat*	*Extinct*	*Endemic*	*Number*	*Area (hectares)*
Antigua and Barbuda	6		4	3		1	13	6 628
Aruba	5		2				1	30
Bahamas	14	2	22	26		71	37	125 338
Barbados	3	1	3	3		2	6	290
Cuba	38	6	150	837	25	952	84	1 853 765
Dominica	6		4	59		97	7	17 028
Dominican Republic	33	7	37	71		54	24	1 049 599
Grenada	5		2	5		4	1	618
Haiti	28	8	46	27	1	26	9	9 975
Jamaica	29	2	72	376	2	382	165	176 914
Netherlands Antilles	8		4			3	6	12 271
St. Kitts and Nevis	5			3			2	2 625
St. Lucia	9	1	9	9		3	46	9 649
St. Vincent and the Grenadines	5	1	6	8		4	31	8 284
Trinidad and Tobago	10		6	16		27	16	20 887
US Virgin Islands	6	1	4	6	1	4	6	5 828
Caribbean subtotal	**210**	**29**	**371**	**1 449**	**29**	**1 630**	**454**	**3 299 729**
Cape Verde	7	1	13	1		114	5	1 415
Sao Tome and Principe	15		42	1		123		
Atlantic subtotal	**22**	**1**	**55**	**2**		**237**	**5**	**1 415**
Bahrain	6						4	1 325
Comoros	16		21	3		4		
Maldives	5							
Mauritius and Rodriguez	37	46	19	255	43	289	26	13 054
Seychelles	22	2	38	80	2	78	20	41 975
Singapore	21		1	14	1	16	9	3 173
Indian Ocean subtotal	**107**	**48**	**79**	**352**	**46**	**387**	**59**	**59 527**

Country or area	Animals			Plants			Protected areas	
	Threat	Extinct	Endemic	Threat	Extinct	Endemic	Number	Area (hectares)
Cyprus	10		4	49		131	27	101 227
Malta	10			15	1	24	8	311
Mediterranean subtotal	**20**		**4**	**64**	**1**	**155**	**35**	**101 538**
American Samoa	13	1		8		8	11	5 127
Cook Islands	8	14	7	10		12	1	160
Federated States of Micronesia	70	3	22	3		90		
Fiji	22		40	30	1	277	32	29 589
Kiribati	7		1				11	58 841
Marshall Islands	9							
Nauru	1		1					
Niue	1						3	
Northern Marianas	24		2	7		12	9	2 796
Palau (Belau)	70	1	12			3	3	1 459
Papua New Guinea	94	2	323	93		419	36	1 039 856
Samoa	10	1	9	20		67		
Solomon Islands	39	3	81	43		37		
Tokelau	4					1		
Tonga	10	1	3			3	10	3 727
Tuvalu	8							
Vanuatu	15		15	25		24	5	207
Pacific subtotal	**405**	**26**	**516**	**239**	**1**	**953**	**121**	**1 141 762**
Total	**764**	**104**	**1 025**	**2 106**	**77**	**3 362**	**674**	**4 603 971**

Source: World Conservation Monitoring Centre.

driftnets which impact marine mammals, turtles, birds and non-targeted fish; and overfishing in general. Coastal fisheries in small island developing States, once abundant, have become scarce owing to overfishing by both artisanal and small-scale commercial fishing. Inadequate monitoring makes it difficult to quantify the overall damage to marine life from such activities.

Freshwater biodiversity

7. Although it has not been studied as much as marine and coastal biodiversity, some small island developing States have important freshwater biological diversity. They include plants and animals that are rare, endemic, introduced species, including many that are threatened by habitat degradation. Unlike their marine counterparts, which may be dispersed over great distances by ocean currents, inland freshwater aquatic species have more restricted access to dispersion routes. Many native freshwater species are not currently utilized commercially and their status is not well documented.

Aquaculture

8. Although this industry is becoming more important for some small island developing States, the sector is faced with

constraints and sustainability problems. Because of little previous experience in fish farming in many small island developing States, often there are few domesticated native species. Thus, new and/or genetically improved species have been proposed, which may play an important role in future aquaculture development. However, the introduction of non-native species may have environmental impacts and alter traditional ownership rights to land and water resources.

9. In view of the many factors affecting the biological diversity of small island developing States, the responsibility for conserving this biodiversity is disproportionate to their capabilities. With regard to nature conservation through designation of protected areas, there is considerable variation among small island developing States; many small island developing States have no protected areas, while others, such as Fiji, the Bahamas and Cape Verde, have considerable networks, often incorporating over 10 per cent of their land area (see table).

10. Upon submission of the first national reports to the fourth meeting of the Conference of the Parties, more information on the current state of biological diversity of small island developing States and the status of implementation of the Convention on Biological Diversity will become available.

III. Efforts of small island developing States at the national and regional levels

11. Among the 41 States and self-governing territories classified as small island developing States by the United Nations, 32 have ratified the Convention on Biological Diversity; three others have become signatories as of 12 November 1997. Several small island developing States and archipelagoes in developing countries contribute to the international network of biosphere reserves and the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage List. Conservation in such areas is promoted through the exchange of information and experience among insular protected areas, the provision of technical assistance and training opportunities, and the development of comparative studies among groups of islands.

12. A pilot regional Global Environment Facility (GEF)-funded project in the South Pacific is being coordinated by the South Pacific Regional Environmental Programme (SPREP). It covers 15 island countries in the region, with the goal of protecting their biological diversity by facilitating establishment of conservation areas, with agreed development criteria based on long-term ecological sustainability. At the time of the mid-term review of the project in August 1996, 17 conservation areas were at various stages of planning and establishment.

IV. International efforts aimed at assisting small island developing States in the area of biodiversity

13. According to the GEF quarterly operational report of June 1997, GEF approved regular projects for the Comoros and Mauritius. It also endorsed enabling activities for 14 small island developing States, including Antigua and Barbuda, the Bahamas, Barbados, Cape Verde, the Comoros, Cuba, Fiji, Maldives, the Marshall Islands, Mauritius, Seychelles, Solomon Islands, Saint Vincent and the Grenadines, and Vanuatu.

14. In its preamble, the contracting parties to the Convention acknowledged the special conditions of the least developed countries and small island developing States. In its medium-term work programme, the Conference of Parties to the Convention, at its first meeting, agreed that the biological diversity of marine and coastal ecosystems would be the first thematic focus to be addressed at its second meeting. Subsequently, at its second meeting, the Conference of Parties, in its decision II/10, gave specific guidance to the Executive Secretary regarding the conduct of work in this programme area, and also suggested that the United Nations Secretariat support the work of its Subsidiary Body on Scientific, Technical and Technological Advice in regard to the special conditions of least developed countries and small island developing States. Subsequently, at its third meeting, in its recommendation III/2, the Subsidiary Body recognized the special significance of small island developing States in the global conservation of marine and coastal biological diversity.

15. In its operational strategy for coastal, marine, and freshwater ecosystems, GEF has agreed that the needs of tropical island ecosystems will receive particular attention. With regard to mountainous ecosystems, it has also indicated that activities in this operational programme will initially address the conservation and sustainable use of biodiversity areas under increasing human pressure and imminent threat of degradation, including tropical islands.

16. In March 1997, the governing body of the Food and Agriculture Organization of the United Nations (FAO) approved a programme of fisheries assistance for small

island developing States, which includes (a) institutional strengthening and national capacity-building; (b) enhanced conservation and management of exclusive economic zone fisheries; (c) improved post-harvest fish management and marketing; (d) a safety-at-sea component; (e) strengthening the economic role of national fisheries industries and privatization of fisheries investments; and (f) aquaculture and inland fisheries conservation, management and development.

17. During the period under review, FAO prepared a review of the uses and status of trees and forests in land-use systems in Samoa, Tonga, Kiribati and Tuvalu, including an annotated checklist of tree species of agro-forestry. The review contains recommendations for the development of agro-forestry strategies and the conservation of the diversity of species used in traditional agro-forestry systems. FAO previously assisted South Pacific countries in collecting, conserving, characterizing and documenting root and tuber crop genetic resources. It plans to evaluate the status of existing *ex situ* collections of plant and animal genetic resources for the South Pacific region, and to propose actions to address related problems. It is also attempting to strengthen national capabilities for the conservation and sustainable utilization of existing genetic resource collections. In the period 1992-1994, it supported an improved seed production project covering 14 countries in the Caribbean region. The objective was to strengthen national capacities to conserve and document existing varieties of crops. Field and laboratory standards were established for seed quality control for sexual seed and vegetative planting materials to facilitate exchange, seed production and further development of seed technology.

18. The Caribbean Amblyomma Programme, which is supported by the Caribbean Community, is jointly executed by FAO and the Inter-American Institute for Cooperation on Agriculture. It became active in Anguilla and Saint Kitts and Nevis in 1995, and in Montserrat and Saint Lucia in 1996. Dominica, which is surrounded by heavily infested islands, launched its national programme in February 1997, and Antigua and Barbuda and Barbados were expected to join in 1997. The Programme has made notable progress in strengthening veterinary services and helping Governments improve their legislation and quarantine procedures. With funds from Japan, FAO operates the Fiji-based South Pacific Aquaculture Development. Fifteen countries from the region participate in addressing problems of sustainable aquaculture development, including the responsible use of alien species, human resource development in aquaculture, economic viability, and stock enhancement aimed at rehabilitating fisheries and habitats, especially in coral reef areas. FAO and the United Nations Environment Programme (UNEP) have implemented a field project on stock enhancement of inland waters of Papua New Guinea. The project has facilitated the introduction of international codes of practice on the responsible use of introduced (alien) species intended to increase productivity of inland river systems. FAO's Special Programme on Food Security has also developed a multidisciplinary project in Papua New Guinea, involving water control, the intensification of production systems, diversification, the establishment of demonstration aquaculture farms and the analysis of socio-economic constraints.

19. The Intergovernmental Oceanographic Commission (IOC) of UNESCO provides a good scientific focus for regional activities in the field of biodiversity, as well as for inputs directly to the Convention secretariat, through the IOC Programme on Ocean Science in Relation to Living Resources (OSLR), the Global Coral Reef Monitoring Network and the IOC Marine Biodiversity Strategy. Over the longer term, the establishment of a Global Ocean Observing System will provide a basis for systematic monitoring of factors relevant to assessments of marine biodiversity. OSLR represents a framework programme for IOC member States to share knowledge, develop cooperative actions and address uncertainties about marine living resources and their biodiversity, through joint scientific research, in conjunction with international and intergovernmental initiatives and programmes. The IOC marine biodiversity strategy includes components on monitoring, training and capacity-building.

20. UNESCO activities relating to biodiversity in small island developing States under the Heritage Convention include promotion of international instruments for protecting biological diversity and the natural heritage; conservation as part of sustainable development; integrated coastal management; and traditional ecological knowledge about small island developing States biodiversity. As part of its medium-term strategy, the Twenty-Eighth UNESCO General Conference adopted a six-year multidisciplinary project, entitled "Environment and development in coastal regions and small islands". In January 1996, the organization launched an interregional project, entitled "Integrated biodiversity strategies for islands and coastal areas", with the goal of assisting integrated biodiversity strategies for interregional cooperation between coastal States and islands, and promoting implementation of the Convention on Biological Diversity.

21. There has been heightened interest in traditional approaches to the use and management of natural resources. UNESCO work in this area includes promoting ethnobotany

and sustainable use of plant resources within the World Wildlife Foundation (WWF)/UNESCO/Royal Botanic Gardens Kew Initiative on People and Plants; support to the regional non-governmental organization TRAMIL for work on popular use of Caribbean medicinal plants; and regional collaborative research on Caribbean coral reefs and beach stability.

22. UNEP extended assistance to small island developing States within the framework of the climate change, biological diversity, and desertification conventions. Small island developing States-related work within the UNEP sub-programme "Caring for freshwater, coastal and marine resources (1998-1999)", includes facilitation of policy-relevant assessments of the state of small island developing States fresh and marine waters, and their living resources, and development of tools and guidelines for sustainable management and use of small island developing States' fresh and coastal waters and living resources. Further, the recently adopted Global Programme of Action for the Protection of Marine Environment from Land-based Activities envisions a number of regional workshops, some in small island developing States, to address land-based environmental pollution, including its impacts on biodiversity. Under its sub-programme, "Caring for biological resources", and within the context of the Convention, UNEP is providing assistance to developing countries, including small island developing States, in the formulation of policy instruments for the integrated management of biological resources. Small island developing States also benefit from UNEP scientific support and technical advisory services in preparation of (a) biodiversity country studies; (b) biodiversity data management projects; (c) the formulation and implementation of national biodiversity strategies and action plans; and (d) the preparation of national biosafety frameworks, which also review the biodiversity of small island developing States.

23. An international coral reef initiative workshop was held in Seychelles in 1996 for the Western Indian Ocean and the East African region, to establish the basis for a strategy and action plan for conserving and managing coral reefs in the region. UNEP continues to assist small island developing States in enhancing their technical and managerial capacities for environmental management, including biodiversity, through its regional advisory services programme, which facilitates the continuous training of national experts.

24. The organization has secured GEF funds for biodiversity country studies, biodiversity data management, national biodiversity strategy and action plans and/or national biosafety frameworks for a number of small island developing States, including the Bahamas, Barbados, Cuba, Mauritius, Seychelles, Solomon Islands, Saint Lucia and Vanuatu. It has also produced technical documents on the features of biodiversity in small island developing States, using geographic information systems databases, and is currently assisting the Bahamas, Barbados, Seychelles, Solomon Islands and Vanuatu in developing national biodiversity action plans, funded by GEF. Other activities undertaken by UNEP in support of small island developing States include (a) a workshop on implementation of international conventions related to biological diversity, held in Mozambique in 1997; (b) assistance in developing a draft law on marine conservation areas for Tuvalu; and (c) assistance in preparing a draft framework on environmental law for Kiribati, which contains provisions on conservation of biodiversity.

25. In 1996, the General Assembly of the World Conservation Union (IUCN) requested its members, commissions and the Director-General to assist small island developing States in the implementation of the Programme of Action for the Sustainable Development of small island developing States. Through its Biodiversity Policy Coordination Division, IUCN convened a workshop on additional funding sources for small island developing States for Convention implementation. Further, it organized a workshop on marine biodiversity jointly with the first meeting of the Conference of parties to the Convention. In collaboration with UNEP, IUCN is developing a global strategy and action plan for alien invasive species, which are a major problem for small island developing States' biodiversity.

26. IUCN has also engaged in work on management and sustainable use of marine and coastal resources through its regional and country offices. In the context of the Convention on Biological Diversity, IUCN is working to facilitate implementation of the Jakarta Mandate, including key small island developing States issues, such as protected areas, alien species, integrated marine and coastal area management, marine and coastal living resources and mariculture. In collaboration with the Centre for International Environmental Law and WWF, it has published a document, entitled "Biodiversity in the seas". In collaboration with UNEP and World Resources Institute, it has co-published a document, entitled "National biodiversity planning: guidelines based on early experiences around the world."

27. The World Conservation Monitoring Centre (WCMC) has developed large databases on small island developing States biodiversity, which contain much information on small island developing States threatened species, habitats and protected areas (see table). These databases have been

the foundation for a series of recent WCMC reports on the status of small island developing States biodiversity. It also has undertaken a global review of small island developing States' biodiversity, identifying a number of global threats, including demographic and developmental pressures and natural disasters.

28. Issues relevant to small island developing States' biodiversity have been addressed in two global WWF publications, *World Conservation Strategy*, and *Caring for the Earth: A Strategy for Sustainable Living*. These publications give a comprehensive account of major small island developing States concerns, and provide a solid basis for the consideration of issues covered in the Programme of Action for the Sustainable Development of Small Island Developing States.

29. Specific actions to be taken by the secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) include designation of a small island developing States coordinator for CITES activities; preparation of information packets for non-Party small island developing States; provision of technical assistance to parties and non-parties; and conveyance of specific recommendations to non-party small island developing States encouraging actions to promote compliance with CITES requirements.

V. Conclusions and recommendations for future action at the national, regional and international levels

A. Conclusions

30. The biodiversity of small island developing States is seriously threatened by a combination of natural and anthropogenic factors. Effective conservation and sustainable use of small island developing States biodiversity entails the sustainable management of genetic resources for food and agriculture – forestry, fisheries and aquaculture – which may call for a "farming systems" approach. For forestry and capture fisheries, it implies adopting an environmentally sound and socially beneficial management approach, integrated with other land and water management. Community-based management systems and related land and fishing rights in supporting food systems are important as a basis for applying this approach. Implementation of relevant, regional and international agreements are particularly important for fishery resources that migrate through or straddle areas of the natural jurisdiction of small island developing States.

31. In order to curb rapid loss of biodiversity, the deforestation caused by agricultural expansion and overharvesting of forests must be controlled so as to reverse the serious environmental consequences of lost tree cover and downstream impacts on marine areas. For sustainable forest use, the remaining forest areas of most small island developing States require urgent attention, including possible reorganization of the entire logging industry sector. Deforestation must be monitored and minimized through a coordinated policy for effective use and conservation. In erosion-prone areas, farmers must be encouraged to adopt appropriate agro-forestry practices, which also should become an established component of integrated rural development.

32. Further research into the "greening" of small island developing States is necessary to improve knowledge of the original indigenous plant species and formations; select and use local species suitable for incorporation in soil and water conservation, range regeneration and fodder production, and fuelwood supply; and screen and eventually introduce suitable non-indigenous species from similar habitats.

B. Recommendations

33. Further efforts are needed at all levels to implement the actions, policies and measures identified in the Programme of Action. Moreover, additional measures are also needed to:

(a) *At the national level*:

(i) Build national technological and human capacity for managing natural resources, and upgrade national capabilities for marine and terrestrial resource surveys, by training key personnel and implementing measures to retain their services within the public sector;

(ii) Introduce charges for using sea lanes and straits to internalize part of the costs of small island developing States biodiversity losses arising from inappropriate practices, such as waste discharges, incineration or accidental spills in proximate national or international waters. Charges and taxes on enterprises for discharges of inadequately treated wastes should also be considered, taking into account the potential biodiversity losses resulting from such practices;

(iii) Strengthen national capabilities to maintain agro-biodiversity, including animal and plant protection and quarantine services, through assessment and strengthening of national legislation, facilities and services, including surveillance;

(iv) Enhance farming systems and improve management of natural resources, as applicable; rehabilitate degraded habitats, where appropriate; and monitor the impact of development programmes, including the impact of introduced species on native ecosystems, and the success of rehabilitation efforts;

(v) Evaluate and modify, if necessary, and implement existing guidelines and codes of practice on best practices in farming systems and species introduction;

(b) *At the regional level*:

(i) Strengthen regional activities for harmonizing legislation and promoting the exchange of technologies and expertise;

(ii) Strengthen the capacity of regional bodies to undertake surveys on reef, estuary, wetland and lagoon resources; monitor and promote innovative coral reef and mangrove programmes.

(c) *At the international level*:

(i) Assist small island developing States in developing inventories of marine biodiversity resources and in strengthening regional and marine research centres;

(ii) Support participation of small island developing States representatives in relevant global negotiation processes, including in meetings of the Convention on Biological Diversity, especially the Conference of parties to the Convention and its Subsidiary Body on Scientific, Technical and Technological Advice, and in expert and liaison groups, to ensure appropriate consideration of small island developing States priorities;

(iii) Supports small island developing States in strengthening national and regional capabilities for the conservation and sustainable use of genetic resource for food and agriculture, including implementation of priorities identified in the Global Plan of Action for Plant Genetic Resources;

(iv) Provide technical assistance to assess and revise, where needed, national legislation, implement appropriate training, and enhance database development and technology transfer. Countries which import small island developing States animal and plant resources should be encouraged to assist small island developing States in upgrading their facilities and strengthening animal and plant protection and quarantine services to ensure achievement of international standards.

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Progress in the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States

Report of the Secretary-General

Addendum

National institutions and administrative capacity in small island developing States*

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I. Introduction

1. Pursuing sustainable development requires, *inter alia*, a strengthening of national institutions and administrative capacity. This need is clearly recognized in the Programme of Action for the Sustainable Development of Small Island Developing States.

II. National action for institutional and administrative capacity-building

2. The institutional response of many small island developing States to meet the new needs of sustainable development have taken various forms. A common feature that has emerged is the establishment in several of them of a high-level body, either a council or commission, often chaired by the head of the Government or a senior minister. For example, in Mauritius a national environmental commission was set up, chaired by the Prime Minister, with a broad membership, including ministers responsible for economic planning, finance, education, science and technology, energy and natural resources, tourism, industry, health, justice and local government. A key mandate of the commission is to ensure coordination and cooperation between public departments, local authorities and other governmental organizations engaged in environmental protection programmes. In Barbados, a national commission on sustainable development has been established, with broad representation from various ministries and the involvement of the private sector and major groups. A major responsibility of the commission is to facilitate national-level coordination of sustainable development programmes and to promote public awareness. Similarly, an environment, science and technology commission in the Office of the Prime Minister of the Bahamas is broadly represented, with participation by academics and the private sector. The principal task of the commission is to coordinate efforts to protect the environment, implement sustainable development policies, and advance the use of science and new technology. In Fiji, an interdepartmental coordination mechanism has been set up to provide for an effective environmental management capability, heritage protection and meaningful public participation. In the Federated States of Micronesia, a President's Council on Environment and Sustainable Development has been established to coordinate and oversee sustainable development activities of national government departments.

3. Formulation of a national sustainable development strategy that serves as an overall policy framework is another important initiative taken by many small island developing States Governments. In Singapore, the Green Plan, which dates back to the early 1990s, has served as a national master plan to guide the country into the twenty-first century. Over 130 specific action programmes have been formulated and are under implementation, with inputs from government ministries, non-governmental bodies and private organizations. Industry has taken a more proactive approach, while heightened awareness among the communities has led to their greater involvement in numerous environmental activities. In the Pacific, 13 island countries have prepared and adopted national environmental management strategies. This has been accompanied by an increase in staffing of relevant units in most Pacific small island developing States.

4. In Haiti, the establishment of the Environment Ministry in 1995 was followed by the preparation of a national environment action plan, which aims to integrate Haiti into the environmental mainstream and provide the Government with a special tool for the sustainable development of the country. In addition, specific environmental directives have been tentatively drawn up for waste management and air pollution reduction and metal scrap disposal. With the assistance of international institutions, Haiti is also proceeding with the codification of environmental legislation as a further step towards a strengthened institutional capacity for achieving sustainable development objectives.

5. A number of small island developing States Governments have extended the above-mentioned initiatives to specific sectors. For instance, in the tourism industry, which is a major sector in many small island developing States, an integrated approach has been adopted to address the sustainability of tourism in all its dimensions, including the new institutions and administrative capacity required for achieving sustainable tourism. A multi-pronged strategy, composed of new legislation, training and restructuring of government agencies, has been implemented. A wide range of new laws have been enacted in some small island developing States, establishing standards for land use in tourism, tourism facilities and investment in tourism. For instance, in Saint Lucia, following the establishment of a national sustainable tourism commission, the Minimum Standards Act has been adopted with a view to addressing all areas of hotel, restaurant and tourism carrying capacity. Jamaica has carried out a review of existing environmental legislation, which has resulted in the passage of new legislation requiring the conduct of an environmental impact assessment for all new development.

6. In addition, some small island developing States, such as Cyprus, have started using economic instruments as a new

tool for reorienting tourism development. Various new tax incentives have been introduced to diversify and upgrade tourism products. Fiscal instruments are used to encourage sound land use and coastal zone practices. The same set of instruments have been applied in other tourism-related sectors so as to improve the overall quality and balance of sustainable tourism.

7. But although these measures are important achievements, there are still small island developing States that have not yet taken action to put in place the necessary legislative and administrative frameworks that will enable them to meet the growing requirements of sustainable development programmes and activities. Even in those that have taken important initiatives, key obstacles to effective national cross-sectoral and interdepartmental coordination remain, such as inadequate skilled manpower resources allocated to the enforcement of new legislation, and weak official status and authority accorded to new coordination mechanisms that are yet to be sufficiently funded and staffed in some small island developing States. The experiences of small island developing States to date suggest that institutional and administrative capacity-building is a protracted and complex process that requires sustained political commitment and sufficient resources.

III. Regional cooperation

8. Realizing the constraints arising from their limited financial and human resources, small island developing States Governments have shown greater interest in regional and subregional cooperation for building and strengthening national institutions and administrative capacity. Many regional and subregional organizations have carried out various activities in support of small island developing States, including strengthening of specific national institutions and administrative capacity (for details, see E/CN.17/1998/7/Add 7). For instance, the Caribbean Center for Development Administration (CARICAD), with funding from the United Nations Development Programme (UNDP) and the Caribbean Development Bank, has been working with six small island developing States Governments over the past three years to strengthen institutional capacity for defining and implementing national sustainable development planning and programmes. Four modalities were adopted to strengthen national institutions: (a) establishing a national advisory and coordinating mechanism or sustainable development council; (b) launching a consultative process at the national and regional levels; (c) conducting case studies of innovative experiences from which to derive policy and operational insights and lessons; and (d) establishing a regional network for information sharing. Since the start of this project, CARICAD has collaborated extensively with national sustainable development councils in these countries in strengthening public environmental management systems, organizing training in key areas pertaining to institutional development and capacity-building, and conducting case studies in priority areas. At the recent Caribbean ministerial meeting on the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States, it was recommended that CARICAD, with support from interested Governments and relevant regional and international agencies, extend the network of national sustainable development councils to the whole region.

9. In the Pacific, a number of agencies are involved in providing assistance in capacity-building in small island developing States. For instance, the South Pacific Regional Environment Programme (SPREP) has coordinated the preparation of national environmental management strategies throughout the region, with assistance from the Asian Development Bank (ADB), UNDP and Australia. The process included a review of relevant legislation, preparation of a state-of-the-environment report, national seminars and the development of a national environmental strategy. In addition, regional cooperation has taken place under the Capacity 21 Project funded by UNDP, aimed at strengthening national frameworks for sustainable development, sustainable development planning and financing, environmental legislation and environmental law training. Also, the South Pacific Commission (SPC) is facilitating the work of the Pacific Sustainable Development Network, which is designed to strengthen the capacity of institutions in the region and to develop effective and efficient systems for information exchange. Since the Global Conference on the Sustainable Development of Small Island Developing States, numerous workshops and seminars have been held by United Nations and non-United Nations organizations for the training of civil servants involved in environmental management, not only in the Pacific but also in the Caribbean (for more details, see E/CN.17/1998/7/Add.9).

IV. Action by the United Nations system

10. Recognizing the lack of institutional and administrative capacity in small island developing States, United Nations agencies have undertaken a variety of programme activities and projects with a view to

strengthening the capacity of small island developing States to pursue sustainable development. A short review of selected activities and projects is provided below on a region-by-region basis.

A. Asia and the Pacific

11. The United Nations Environment Programme (UNEP) has provided support to Kiribati, Tuvalu and Vanuatu in environmental law, assisting them in drafting environmental legislation and formulating a framework for environmental law. The Economic and Social Commission for Asia and the Pacific (ESCAP) has several projects aimed at enhancing national institutions and the administrative capacity of small island developing States in the ESCAP region. One project involves subregional workshops on economic stabilization, liberalization and deregulation, while another involves enhanced intraregional cooperation in trade and investment; both projects emphasize the fragile ecology of island countries and the importance of integrating environmental consideration in the economic decision-making. In addition, the ESCAP/Pacific Operation Centre has assisted SPREP in the implementation of Capacity 21 projects, including the design and conduct of workshops. It has also provided advisory services to SPC and the South Pacific Forum (SPF), including recommendations for rationalizing the management of marine resources among the regional bodies.

12. Within the framework of its regional programme, UNDP has supported both the establishment of a regional network for the exchange of information on Pacific island marine resources and the concerted efforts of Pacific island countries to maximize the exploitation of abundant tuna resources while ensuring the sustainability of future stocks. UNDP has also supported, through the regional indicative planning figures (IPFs), programmes on improved management, use and development of forest and tree resources, and management of water supply and sanitation.

13. A programme on capacity-building for sustainable development in the South Pacific, funded from UNDP's Capacity 21, is geared towards assisting the Pacific small island developing States in strengthening governmental and non-governmental capacity for sustainable development through the greater participation and improved capabilities of traditional Pacific island institutions. The programme fosters the participation of the general public, including women, in development planning. The anticipated outcomes include improved capacity of Governments to promote and enforce sustainable land and sea resource use; the creation of integrated, cross-sectoral and participatory national frameworks for sustainable development for each subregion (Micronesia, Melanesia and Polynesia); improved capacity of financial planners and investment institutions to integrate environmental issues into lending policies; and the reform of legislation to support sound land and sea management.

14. The Department of Economic and Social Affairs of the United Nations Secretariat, through its technical assistance activities, implemented a project in the Marshall Islands during 1993-1996 aimed at improving public sector management. The project addressed a number of constraints faced by the public service of the Marshall Islands, including its organization and staffing, policy-making capacity in the economic and social sectors, and the shortage of adequate skills of many staff members. The World Bank and the SPF secretariat also supported and participated in the implementation of the project.

15. The United Nations Conference on Trade and Development/World Trade Organization International Trade Centre has conducted several training programmes and other related projects in the region, as well as in the Caribbean, aimed at enhancing national capacity in international trade, including improvement of import management. Other activities of the Centre include identification of technical cooperation needs in the export/import sector and a series of dissemination seminars and workshops.

B. The Caribbean

16. The Caribbean work programme of the Economic Commission for Latin America and the Caribbean (ECLAC) contains an environment and development component whose objective is to strengthen the capabilities of member countries to incorporate environmental considerations into development planning. Among other programme activities, ECLAC has conducted a critical examination of the availability of environmental information in the Caribbean, and an assessment of the implications for planning and decision-making. Its work in the environmental statistics for the region will lead to a database and a directory of sources of environmental information.

17. In the Caribbean small island developing States, UNDP is supporting natural disaster management and reduction programmes through regional IPF funding. The main thrust of the activities is aimed at creating national and regional capacities to deal with natural and man-made disasters, and also to address the preparation and implementation of contingency response measures and comprehensive long-term disaster management plans integrated into the national development planning process.

The organization is also supporting the establishment of an independent satellite-based regional radio and data communications network, with multilingual transmission capabilities, through the enhancement of the regional information distribution system of the Caribbean News Agency. It is envisaged that the project will also strengthen the regional integration linkages within the Caribbean Community (CARICOM), as well as the information link between CARICOM and Latin America. Furthermore, UNDP is currently providing assistance in upgrading the maritime legal and administrative regimes of member States of CARICOM for the implementation of a system of port State control, which will enable them to exercise jurisdiction over foreign vessels in order to ensure compliance with international maritime safety and pollution regulations. UNDP is also supporting a number of other projects, including (a) the enhancement of land-use policies and regimes throughout the Caribbean under a human settlements and related environmental management programme; (b) institutional strengthening of the Environmental Division of the Guyana Agency for Health Sciences, Education, Environment and Food Policy; and (c) institutional strengthening of the Planning Institute of Jamaica.

18. Pursuant to the provisions of the Small Island Developing States Technical Assistance Programme, UNDP undertook an assessment of the priority technical needs of the Caribbean small island developing States. The results were embodied in two reports. The first, prepared by CARICAD, was based on a careful process of consultations with a number of stakeholders in the region to identify and assess priority needs in the technical cooperation and capacity-building necessary to implement the Programme of Action. A multidisciplinary team, with expertise in physical planning and environmental legislation, agriculture and post-harvest technologies, natural resources management, sustainable tourism development, institutional development and capacity-building, visited a number of Caribbean small island developing States with different ecological, demographic and economic characteristics. The second report constituted a compendium of technical cooperation among developing countries project profiles designed to address some of the unmet technical cooperation needs and gaps in institutional resources of the Caribbean small island developing States. Most of the project profiles seek to strengthen capacities at the national, subregional and regional levels through the convening of technical training workshops and symposia in other priority areas of the Programme of Action.

19. A four-volume directory of experts of small island developing States, prepared with UNDP support and circulated to all UNDP offices and key intergovernmental institutions in the small island developing States, has become a valuable source of reference for identifying and drawing upon appropriate national and regional expertise available in small island developing States for the implementation of the Programme of Action.

C. The African small island developing States

20. UNEP has provided assistance to Seychelles in collaboration with the United Nations Centre for Human Settlements to formulate new land planning and development control legislation and regulation, with the objective of establishing an adequate legal and institutional framework for the management and sustainable utilization of land resources. Within the framework of its regional programme, UNDP seeks to facilitate access of a number of African small island developing States to new and reliable knowledge and information through the Small Island Developing States Information Network (SIDSNET). Small island developing States' institutions in Africa will be enabled to update their databases on-line, and apart from providing access to important small island developing States databases, SIDSNET will include World Wide Web calendars, forums and directories. Although it will initially focus on only three chapters of the Programme of Action (Coastal and marine resources; Energy; and Sustainable tourism), it will be gradually expanded to include the other issues embodied in the Programme of Action. The African Internet Initiative, with the support of SIDSNET, will ensure that Internet connectivity is provided to Cape Verde, Sao Tome and Principe and the Comoros, and will work with the Indian Ocean Commission to promote inter-island networking. In addition, UNDP has commissioned a non-governmental organization in the region to carry out an assessment-cum-formulation mission of unmet technical cooperation priorities in small island developing States in the Africa region.

V. Bilateral and multilateral assistance

21. National institutions and administrative capacity is one of the few areas that has attracted relatively high bilateral and multilateral assistance. Available data on external support to small island developing States indicate that in 1994, the latest year for which data classified according to the chapters of the Programme of Action are available, annual bilateral commitments to this area totaled US$43.12

million, while multilateral commitments totaled US$8.10 million.

22. However, as in the case of human resources development, external assistance from bilateral sources in this area experienced significant declines. Total bilateral commitments fell from US$54.88 million in 1991 to US$43.12 million in 1994. Multilateral assistance did not change perceptibly in 1994 compared to 1991.

VI. Conclusions and recommendations

A. Conclusions

23. Since the Global Conference, most small island developing States' Governments have taken important initiatives to strengthen national institutions and administrative capacity. The foregoing brief review shows that many of them have established high-level bodies charged with the overall responsibility for guiding and coordinating national policies and measures for integrating environmental protection and development. New legislation has been adopted to provide a sound and updated legal framework for the pursuit of sustainable development. Comprehensive national strategies have been formulated that will provide a blueprint for long-term coordinated action. There has also been a growing trend of public participation.

24. Regional organizations and the United Nations system have provided indispensable support to national efforts concerning institutional and administrative capacity-building. Their assistance, whether through project funding or technical cooperation, has been extended to a large number of programme areas, contributing to the capacity-building of small island developing States in different sectors.

25. There is, however, a continuing need for strong action in this area since small island developing States remain constrained by limited financial, human and technical resources. Some have very limited capacity, even for handling inter-agency coordination. Planning and implementation of sustainable development policies and measures remain uncoordinated, and are invariably fragmented. There is therefore room for improving inter-ministerial coordination at the national level and more effective cooperation at the regional level. The crucial importance of strengthening national institutions and administrative capacity for sustainable development and the difficult capacity-building process that it entails cannot be overemphasized: the significant declines in external financial support in this area are a matter of grave concern.

B. Recommendations

1. National level

26. Small island developing States' Governments should further strengthen their national sustainable development bodies by enhancing their political and legal status, increasing their staffing levels and improving their modalities of operation. Those that have not established such a body should take immediate action to ensure that a national mechanism for guiding and coordinating sustainable development policy be put in place and be given adequate status and resources for effective functioning.

27. Although many small island developing States have adopted new legislation and formulated national strategies, they need to ensure that the new laws are enforced and that strategies are implemented. Particular attention should be paid to the training of civil servants to adequate levels in order to enable them to effectively implement reformed legislation and revised development strategies.

2. Regional level

28. Small island developing States' Governments should both expand and deepen their regional and subregional cooperation in national institutions and administrative capacity-building, especially in areas where they are lacking in expertise and where joint activities in research and training could help to overcome national resource constraints, facilitate the exchange of national experiences and increase the cost-effectiveness of regional cooperation.

29. Regional institutions should be given adequate resources to provide research and training opportunities, undertake critical assessments of priorities and needs, and facilitate the exchange of experience and dissemination of information. Regional institutions that have the right expertise should assist these countries in the preparation of new legislation, as necessary, and in the formulation and implementation of national strategies.

3. International level

30. The international community should provide adequate financial resources to small island developing States so as to enable them to carry out necessary institutional reforms and changes and to improve their national administrative capacity. The United Nations agencies should increase training activities to help to update and improve the skills

of staff engaged in sustainable development activities. Organizations with the appropriate technical capacity, including funds and programmes and specialized agencies, should also provide technical assistance or advisory services to small island developing States in building up their national institutions.

31. Bilateral donors should provide financial and technical support to small island developing States to facilitate their ratification and implementation of relevant international instruments; help to provide training opportunities and facilities, including scholarships, particularly in areas where small island developing States suffer from serious lack of local expertise; and support current efforts at building an information network for small island developing States so that they may have better access to information on the state-of-the-art technology and become active participants in exchange of experience and dissemination of information.

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Progress in the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States

Report of the Secretary-General

Addendum

Regional institutions and technical cooperation for the sustainable development of small island developing States*

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I. Introduction

1. The implementation of the Programme of Action for the Sustainable Development of Small Island Developing States is explicitly based on a tripartite partnership at the national, regional and international levels. Regional cooperation is especially important for small island developing States because their limited human resources and small size make it especially important to pool those resources through regional cooperation and institutions. In addition, to avoid duplication and maximize the complementarities of development assistance projects, it is essential that effective support for regional projects be coordinated through regional bodies. Regional organizations, both within and outside the United Nations system, can play a key role in facilitating efficient and effective assistance to small island developing States and in implementing regional programmes, and the programming, administrative and implementation capacities of the regional institutions can be further improved with the support of member States and other donors.

II. Regional institutions involved in the implementation of the Programme of Action

A. Asia and the Pacific

2. Currently, 13 small island developing States are members and seven are associate members of the Economic and Social Commission for Asia and the Pacific (ESCAP). They participate actively in the annual session of ESCAP's Special Body for Pacific Island Countries and in meetings of ESCAP legislative bodies. Several of them have hosted subregional and regional meetings on aspects of sustainable development.

3. Pacific island countries have developed a well organized structure of eight regional intergovernmental organizations, each with a particular focus funded by member contributions: the Forum Fisheries Agency, the Forum Secretariat, the Pacific Islands Development Programme, the South Pacific Commission, the South Pacific Regional Environment Programme, the South Pacific Geoscience Commission, the Tourism Commission of the South Pacific and the University of the South Pacific. In order to avoid duplication and harmonize their activities, the above organizations have established the South Pacific Organizations Coordinating Committee (SPOCC), a key function of which is to coordinate regional programmes. In 1995, an agreement was reached to establish the South Pacific Regional Environment Programme (SPREP), which was formerly part of the South Pacific Forum as an independent intergovernmental organization providing cooperation and assistance for the protection and improvement of the environment in the South Pacific. In 1997, Governments of Pacific small island developing States signed the Waigani Convention on the prohibition of the import into the South Pacific and the control of transboundary movement and management within the South Pacific of hazardous wastes, and designated SPREP as the secretariat for the Convention.

B. The Caribbean

4. In the Caribbean, the subregional headquarters of the Economic Commission for Latin America and the Caribbean (ECLAC) for the Caribbean, in collaboration with the Caribbean Development and Cooperation Committee (CDCC) and the Caribbean Community (CARICOM), has served as the regional coordination mechanism for the implementation of the Programme of Action. This mechanism collaborates with a number of subregional intergovernmental organizations with a broad range of mandates ranging from specific programme areas to comprehensive sustainable development programmes, including the Caribbean Centre for Development administration, the Caribbean Conservation Association, the Caribbean Council for Science and Technology, the Caribbean Disaster Emergency Response Agency, the Caribbean Environment Health Institute, the Caribbean Tourism Organization, the Association of Caribbean States (ACS), the Organization of American States (OAS) and the Organization of Eastern Caribbean States (OECS). ACS was founded in 1995 after the Global Conference on the Sustainable Development of Small Island Developing States by the Caribbean States – both small island developing States and non-small island developing States – with the objective of facilitating consultation and cooperation among its 25 member States and 11 associated States and for promoting concerted action by them. Governments and civil society have begun to work closely in the implementation of environmental programmes and activities in the Caribbean region. The available information indicates that member States of some of the organizations, such as OECS, have taken increasingly greater financial responsibility for their respective environmental programmes. In the case of OECS, member States contribute some 62 per cent to the

secretariat's staff salaries and thirty per cent to administrative costs.

C. Africa

5. In Africa, the Economic Commission for Africa (ECA) has the mandate to monitor and coordinate the implementation of the Programme of Action but has not demonstrated much engagement. Only one regional intergovernmental organization in the region – the Indian Ocean Commission (IOC), whose membership includes islands in the south-western Indian Ocean – is actively engaged in the implementation of the Programme of Action. Three small island developing States are members of the IOC, whose objectives are to strengthen social economic and political links among the people of its member States and to work towards improving their quality of life through enhanced cooperation. Member States of IOC see cooperation in the subregion as an indispensable means of attaining sustainable development goals that are beyond the capacity of individual member countries.

III. Initiatives of regional United Nations and non-United Nations institutions to strengthen regional cooperation for the implementation of the Programme of Action

A. Asia and the Pacific

6. ESCAP efforts to mobilize regional cooperation for the implementation of the Programme of Action began with the convening of a ministerial conference on environment and development in 1995. The major outcomes of the conference were a ministerial declaration on environmentally sound and sustainable development, and a regional action programme for the period 1996-2000. In May 1997, a regional meeting was held to translate the regional action programme into projects. At that meeting, it was decided that some of the projects should be implemented in collaboration with subregional intergovernmental organizations. In order to promote inter-subregional cooperation, including small island developing States, the Executive Secretary of ESCAP has held three consultative meetings with the executive heads of subregional organizations since the Global Conference. At the most recent one, in 1997, a set of recommendations to strengthen inter-subregional cooperation were formulated. In September 1994, the first ministerial conference on space applications for development in the ESCAP region launched a space applications programme for sustainable development and a strategy for regional cooperation in space applications. Subsequently, in October 1995 an inter-agency subcommittee on space applications for sustainable development was established, *inter alia*, to monitor and analyse trends in space technology applications and to identify areas of complementarity.

7. In collaboration with SPREP, ESCAP has developed a mechanism for the effective monitoring of the implementation of the Programme of Action, consisting of a small support unit and an advisory body. The support unit consists of two cells, one at SPREP, the other at the ESCAP Pacific Operations Centre (ESCAP/POC) in Vanuatu. Its functions include the maintenance of a database of sustainable development activities for use by the advisory body and to prepare reports on regional sustainable development activities for review by the Commission on Sustainable Development. The advisory body, which comprises senior government officials, advises on sectoral priorities, facilitates the monitoring and coordination of the implementation of the Programme of Action, and serves as liaison between the region and the Department of Economic and Social Affairs of the United Nations Secretariat. It is expected that the monitoring process will be enhanced by the Pacific sustainable development networking programme established by the United Nations Development Programme (UNDP) to link government institutes and non-governmental organizations through access to Pactok.[1] This network will be eventually linked to the Small Island Developing States Network to provide an effective means for meeting reporting and monitoring requirements at the regional level. ESCAP/POC cooperates with several non-United Nations regional intergovernmental organizations in developing subregional and national programmes and projects, and provides them with technical assistance on request.

8. SPOCC recently completed a review of the mandates of member organizations in the marine sector to ensure complementarity of programmes of member organizations and to avoid duplication. SPOCC working groups have prepared an input on regional implementation of the Programme of Action for the sixth session of the Commission on Sustainable Development, and are in the process of preparing regional sector strategies for health and agriculture for submission to the special session of the General Assembly on small island developing States issues to be held in 1999. The organization is serving as a useful mechanism for coordinating donor assistance at the regional

level. Member States of the South Pacific Forum have agreed to the preparation of a regional strategy in order to provide focus for regional programming. The Forum Fisheries Agency is currently coordinating a series of multilateral consultations with distant fishing nations aimed at defining the requirements for a regional fisheries management regime.

9. The new legal status of SPREP has allowed it to provide a greater level of assistance to Pacific island countries in international environmental negotiation and improve the access of its member States to external financial resources for environmental activities. SPREP has grown in size, and now delivers a wider range of programmes; in 1991, as a measure of their commitment to sustainable development its 26 members agreed to double the total of their voluntary contributions. SPREP recently revised its action plan. The new plan for the period 1997-2000 identifies five broad priority areas: biodiversity and natural resource conservation; climate change and integrated coastal management; waste management, pollution prevention and emergencies; environmental management planning and institutional strengthening; and environmental education, information and training.

B. The Caribbean

10. In 1995, subsequent to the Global Conference ECLAC/CDCC convened a meeting of experts with a view to identifying regional priorities and establishing a mechanism for regional monitoring and coordination of the implementation of the Programme of Action. At that meeting, a list of priorities were drawn up subject to the approval of Governments. It was also decided that the ECLAC/CDCC and CARICOM secretariats would jointly serve as a regional coordinating mechanism on an interim basis for one year. In fulfilment of its mandate, ECLAC/CDCC has undertaken numerous activities in collaboration with a number of regional and subregional organizations as well as international organizations to coordinate the implementation of the Programme of Action in the Caribbean. By the end of November 1996, it had identified 550 ongoing or planned programmes and projects related to the Programme of Action, which have been entered in a database. Work on the database is continuing through the joint efforts of ECLAC/CDCC, the International Development Research Centre, the United Nations Environment Programme (UNEP) and UNDP. The database is available through the ECLAC/CDCC "Ambionet" home page, at:

http://www.un.org/esa/sustdev

11. In November 1997, ECLAC/CDCC convened a Caribbean ministerial meeting on the Programme of Action. The meeting adopted a comprehensive set of proposals for future action to implement the Programme of Action. Implementation of the proposals is predicated on a tripartite collaborative effort between small island developing States Governments, all the Caribbean regional and subregional organizations in their respective areas of competence, and United Nations organizations. At that meeting, the mandate of the ECLAC/CDCC and CARICOM secretariats to serve jointly as a coordination mechanism was renewed. The two bodies were requested to serve as interim secretariat to an open-ended bureau until such time as a permanent mechanism for consultation and coordination is established. The meeting also decided to establish an inter-agency collaborative group comprising but not limited to the Caribbean Development Bank, UNDP, the OECS secretariat, the University of the West Indies, the Caribbean Tourism Organization, the ACS secretariat, the Caribbean Centre for Development Administration, UNEP and the Caribbean Environmental Health Institute, to support the interim secretariat.

12. The policy initiatives articulated by OECS call for a coordinated approach to facilitating and maximizing inputs from all development groups and social partners at both the subregional and national levels, and a careful balancing of the macroeconomic and environmental imperatives of member States. In 1995, OECS reformulated its development strategy to focus on people-centred and participatory approaches to sustainable development. The following year, with a view to enhancing coordination OECS merged its Fisheries Unit with its Natural Resources Management Unit. The merger allows OECS to present its sustainable development programmes as a single coherent unit, which makes for synergy and better coordination and has resulted in enhanced efficiency and effectiveness.

13. Development of an OECS strategic portfolio and a strategic planning and management system has enabled OECS to channel donor funding to pre-identified priorities of member States, rather than simply to react to and accept donor initiatives. The OECS operational plan for 1996-2000, which includes elements of the Programme of Action, makes a strategic shift from mere conservation and environmental management to sustainable development. It accords priority to coastal resources management, fisheries management and development, watershed management and sustainable

tourism. The OECS Natural Resources Management Unit has begun the implementation of a coastal resources management initiative, and it is currently considering two other initiatives on watershed management and sustainable tourism. The operational plan has adopted the island system management methodology, which integrate different economic sectors, agencies and beneficiary groups; the Unit has developed and is presently field testing in two OECS member States the necessary mechanisms and modalities for operationalizing the methodology. OECS has noted that in its region there has been a better understanding of environmental issues but very limited understanding of sustainable development.

14. In 1996, ACS ministers approved the work programme of the organization, which was founded the previous year. The work programme includes a number of programme areas covered by the Programme of Action. ACS has recognized the need for the development of a regional tourism strategy, and to that end in 1996 it created a number of institutions: the Special Committee for Tourism, the Caribbean Council for Tourism Training and Education, and the ACS Special Fund. The Fund is expected to operate on the basis of voluntary contributions by member countries, international organizations and public and private entities.

15. OAS is currently executing a project on planning for adaptation to climate change, financed by the Global Environment Facility (GEF) in cooperation with 11 CARICOM member countries and the University of West Indies (Barbados). OAS is also executing a regional project on disaster mitigation in the Caribbean, which is funded by the United States Agency for International Development (USAID). The project is a coordinated effort to promote the adoption of natural disaster mitigation and preparedness practices, and it provides OAS with a framework for collaboration within the Caribbean region to establish sustainable public and private-sector mechanisms for natural disaster mitigation.

C. Africa

16. IOC has put in place a regional environmental programme with a view to identifying regional environmental problems, finding solutions for them and implementing projects to cope with the problems in collaboration with all member countries. Some examples of projects under way include integrated coastal zone management, protection of biodiversity, promotion of the subregion as a tourist destination, environmental education and prevention of marine pollution from oil spills.

IV. Technical cooperation activities of regional institutions

17. A number of regional institutions have stepped up their offers to expand technical cooperation for the implementation of the Programme of Action in recent years. Information received from a number of regional institutions indicate, however, that they are still unable to meet the technical assistance needs of small island developing States in their respective regions on account of a number of constraints, which are briefly outlined in section VI below. Technical assistance provided by regional institutions serve three broad purposes: strengthening of human resources capability for natural resources management, mainly through workshops and seminars; preparation of national action plans and programmes and policy briefs for sustainable development; and execution of sustainable development projects. Some highlights of technical cooperation activities of selected regional institutions are provided below.

18. Asia and the Pacific, in the follow-up to the Global Conference ESCAP has undertaken 150 advisory and consultancy service missions at the request of small island developing States. Among other things, ESCAP is currently implementing a region-wide project, with a Pacific islands component, on integrating environmental considerations into the economic decision-making process, with the eventual goal of developing modular training materials on various aspects of best practices through national studies. It is also working on a technical cooperation among developing countries project on enhancing trade and investment linkages between Pacific island countries and other countries in the region. ESCAP/POC has undertaken a number of activities aimed at strengthening the capacity of several non-United Nations regional bodies in collaboration with them, in such areas as organizational restructuring, International Organization for Standardization standard and quality management, and adjustment and reform. ESCAP/POC has cooperated with non-United Nations regional bodies in developing subregional and national programmes and projects that fulfil the goals and objectives of the Programme of Action. Its approach to implementing programmes involves the sharing of ESCAP technical expertise with non-United Nations regional bodies and with small island developing States. SPREP has provided technical assistance for the development of national environmental management strategies in 12 Pacific small island developing States; it is currently carrying out an assessment of environmental legislation in several Pacific Island countries, in collaboration with UNEP. It is also undertaking environmental law training activities in the framework of

Capacity 21 programmes in selected islands, and has planned a workshop on environmental treaties and conventions involving all Pacific Island countries.

19. In the Caribbean, in collaboration with selected regional institutions, OAS is currently providing technical assistance for the execution of three major projects: assessment of coastal and marine problems; assessment of the current state of effluent disposal in the region; and comprehensive review of integrated coastal zone management legislative systems. An important aspect of those projects is to provide policy guidance for action. OECS is providing technical assistance to member States on request through its Natural Resources Management Unit; the technical cooperation among member States mechanism, which involves accessing expertise resident within the public sector of one member State to help another; the provision of financial resources for training; the provision of technical information on natural resource management; and the preparation of policy briefs.

20. In Africa, IOC provides technical assistance to member States through its permanent regional technical committee on environment, which is made up of high-level technical cadres from member States. The technical committee is responsible for identifying projects in member States and for formulating project proposals for consideration by IOC. It is also responsible for liaising with funding agencies to secure funding for approved projects and for executing the projects in member States. The technical committee is assisted by an ad hoc management committee for each approved project, which oversees the implementation of the project.

V. International support for regional organizations of small island developing States

21. OECS has reported that over the last five years, there has been a significant decline in aid flows to support its activities. Assistance from United Nations multilateral sources represent a small percentage of total assistance to the organization, and has also been on the decline. USAID, previously a major donor, has withdrawn from the subregion, but it is expected that it will return. Assistance from the Canadian International Development Agency has declined, and its programmes now have a regional focus, but it is expected to assist OECS in implementing a substantial programme on capacity-building for environmental management. The British Development Division in the Caribbean has committed substantial resources in support of two subregional environmental management programmes to be implemented by OECS and the Caribbean Natural Resources Institute. The European Union (EU) continues as the largest source of assistance to OECS. OAS has benefited from assistance from GEF and USAID for its sustainable development projects in the Caribbean.

22. Information obtained from SPREP indicates that international support in the Pacific for regional activities continues at adequate levels in relation to most areas of the Programme of Action. Australia and New Zealand continue to play a significant role in support of regional initiatives for sustainable development. In 1997, Canada began a second phase of its South Pacific Ocean Development Programme, which like EU programmes utilizes regional institutions and programmes for the delivery of assistance. Negotiations on a new development assistance framework between the EU and South Pacific small island developing States are expected over the next five years. SPREP also benefits from assistance provided by UNDP, the United States of America, France and Denmark.

23. IOC has observed that in the three and a half years since the Global Conference, support for its activities from the United Nations system has been nil. To date, only the EU under the Lomé IV Convention has been forthcoming with funds for projects undertaken by IOC. IOC expects that in 1998, the World Bank/GEF and the International Petroleum Industry Environmental Conservation Association will help to finance a regional oil spill contingency plan project for the subregion. Prospects also exist for support from the Intergovernmental Oceanographic Commission and UNEP in the future.

VI. Constraints faced by regional institutions

24. Information received from regional institutions indicate that the effectiveness of regional institutions generally in delivering programmes and technical assistance is undermined by a number of factors at the financial, technical, institutional and policy levels. The single most important constraints faced by most regional institutions is inadequacy of financial resources to meet immediate needs of member States. As a result, several regional institutions are unable to carry out their core functions, including international agreements, and remain overdependent on project funding. Their work programmes often reflect donor priorities rather than priorities of small island developing States.

25. Next in importance is the constraint posed by inadequacy of technically qualified manpower at the regional and subregional levels, as well as at the level of the regional institutions. This deficiency impairs the ability of the institutions to meet the demands of member States for technical assistance, and results in weak negotiating capacity in international forums, which is often reflected in small island developing States being provided with assistance that does not meet their expressed needs.

26. At the institutional level, a major constraint is the deficiency of regional mechanisms for coordinating the implementation of the Programme of Action, particularly in Africa and the Caribbean. In Africa, no regional coordination mechanism has been established. IOC, which includes elements of the Programme of Action in its work programme is not an official regional coordination mechanism; it does not comprise all African small island developing States and has very meagre financial support. In the Caribbean, jointly with the CARICOM secretariat, ECLAC/CDCC has thus far served as a coordination mechanism only on an interim and therefore insecure basis, also with meagre financial supports.

27. At the policy level, there is a lack of properly articulated policies on sustainable development, and very little or no integration of environmental dimensions in socio-economic policy planning at the national level, which makes it difficult to harmonize priorities at the regional and subregional levels, and to develop coherent and subregional programmes. Often there is considerable hesitancy on the part of national decision makers to implement recommendations of regional institutions or even decisions of regional intergovernmental bodies. In part, this is linked to the insufficiency of human and financial resources available for costly regional projects.

VII. Conclusions and recommendations

A. Conclusions

28. It is clear from the foregoing that the Governments of small island developing States in the Pacific and the Caribbean have put in place a number of regional and subregional intergovernmental institutions with mandates ranging from specific areas of the Programme of Action to the entire Programme. In recent years, they have also demonstrated their commitment to regional institutions through increased financial support for some of them.

29. Regional institutions have taken a keen interest in the implementation of the Programme of Action. In the recent past, regional institutions in the Pacific and the Caribbean have also taken measures to enhance their own effectiveness and efficiency through greater inter-institutional coordination and avoidance of duplication of activities.

30. As noted in section VI above, however, regional and subregional institutions have faced a number of constraints that tend to undermine their effectiveness. The major constraints are related to insufficiency of financial and human resources to carry out core programmes. They are also hampered by the lack of firmly established regional coordination mechanisms, particularly in the Caribbean and Africa, and the inadequacy of integration of environmental dimensions in the socio-economic planning process at the national level, which makes it difficult to identify priorities for the development of coherent regional and subregional programmes.

B. Recommendations

1. National level

31. To strengthen regional cooperation it will be necessary for small island developing States to explicitly integrate environmental dimensions in the long-term policy planning process at the national level, and to identify priority areas for regional implementation in order to enable the development of coherent regional and subregional programmes.

32. In the recent past, small island developing States that are members of some regional institutions have increased their financial support for the running of those institutions. Such support needs to be further strengthened so as to make it commensurate with the needs of all regional and subregional institutions in order to raise their effectiveness.

33. In some small island developing States regions, there is a need for greater political commitment to the implementation of regional programmes.

2. Regional level

34. Efforts to strengthen coordination among regional and subregional institutions have begun in the Pacific. Such efforts are needed in all small island developing States regions. For effective coordination of the implementation of the Programme of Action, there is a need to establish permanent regional coordination mechanisms and to provide them with resources commensurate with their needs.

35. Regional institutions need to make efforts to strengthen their own technical capacity in order to meet technical assistance needs of member States.

36. Regional and subregional institutions need to work more closely with national Governments to identify programmes and projects for the development of realistic regional and subregional programmes for the short and medium terms.

3. International level

37. In view of the obvious benefits to be derived from regional cooperation, the international community needs to adequately supplement the financial resources provided by member States for the support of regional institutions.

38. In order to enable regional institutions to effectively meet the technical assistance needs of member States, there is a need for the international community to assist regional institutions in building their technical capacity to levels that are commensurate with the needs of member States.

39. Although the prime responsibility for the execution of regional programmes and projects rests with small island developing States Governments, in view of the meagre resources of individual small island developing States and the high costs of regional programmes, there is an obvious need for adequate financial support from the international community for timely and effective implementation of regional programmes.

40. Relevant regional commissions and other United Nations bodies need to demonstrate a greater level of engagement in the implementation of the Programme of Action, particularly in Africa.

Notes

[1] Pactok is a low-cost electronic mail network designed to serve the non-governmental organizations movement in the Asia and Pacific region (Pac = Pacific; tok = pidgin for "talk"). for further information, contact Robert Garnsey at:

robg@pactok.peg.apc.org